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July 11, 1995

BY HAND

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D.C. 20554

Re: Permissible Ex Parte Presentation in CC Docket No. 94-102

Dear Mr. Caton:

Pursuant to Section 1.1206 of the Commission's rules, this is to inform the Commission that Mr. Martin Moody of Telident, Inc, along with the undersigned, met with Mr. Alan Thomas of the Common Carrier Bureau on July 10, 1995, to discuss Telident's position in the above-captioned proceeding as set forth in its prior written comments and reply comments. We also presented Mr. Thomas with certain documents, two copies of which are enclosed for the Commission's files.

Please contact the undersigned if you have any questions.

Respectfully submitted,

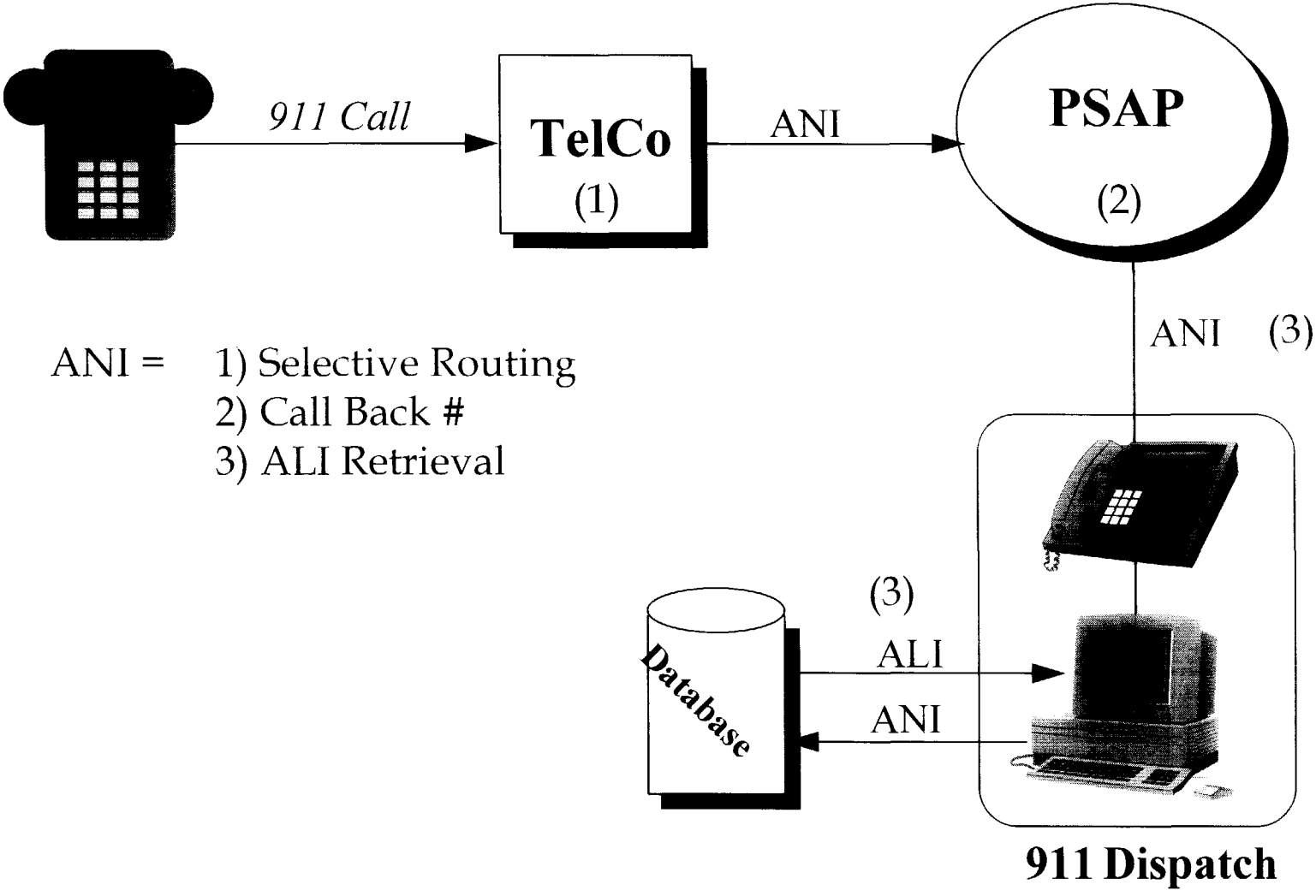
WILKES, ARTIS, HEDRICK & LANE
Chartered

By: 
Robert M. Gurss

Attorneys for Telident, Inc.

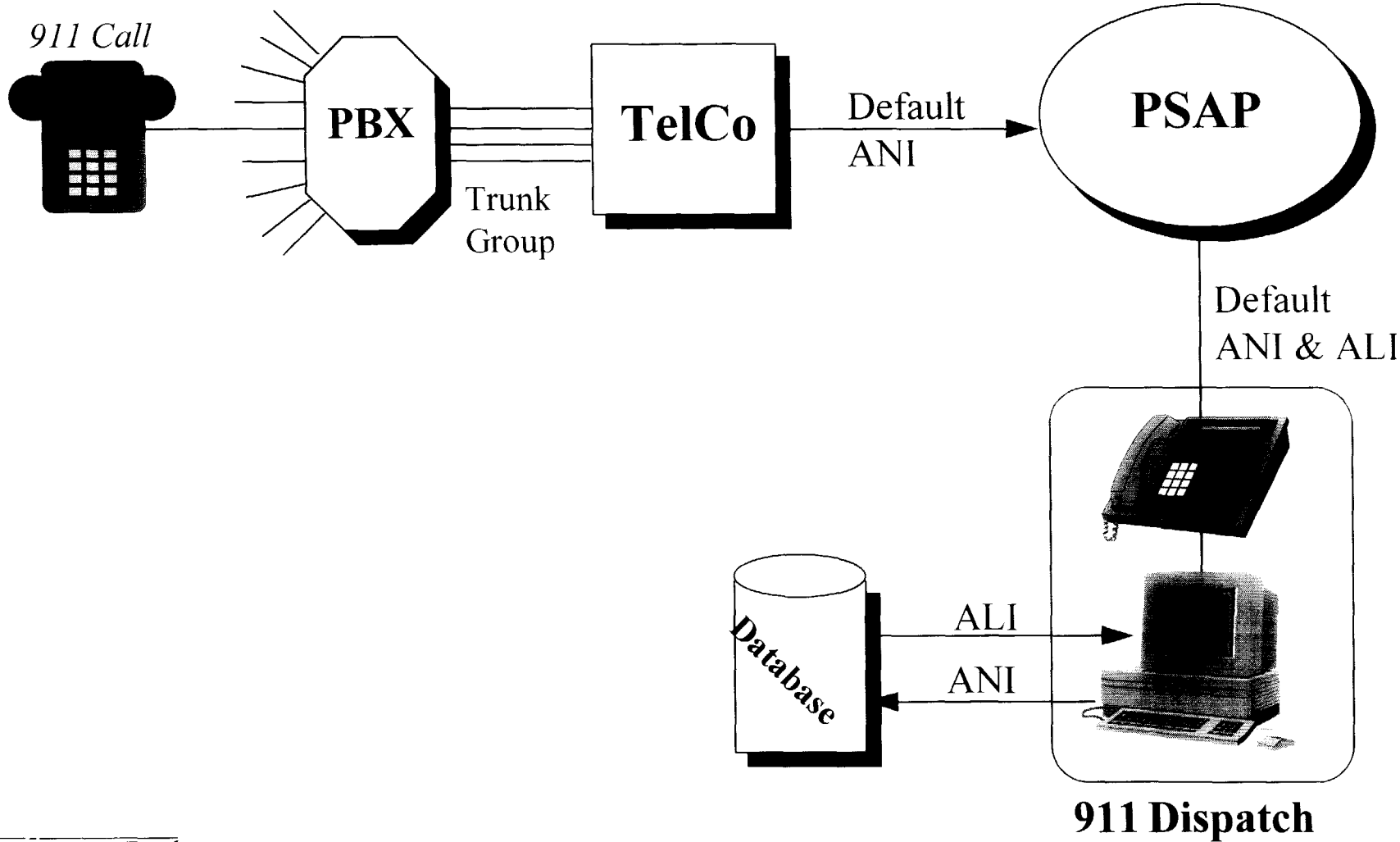
cc: Mr. Alan Thomas
Mr. Martin Moody

The 9-1-1 Call Process

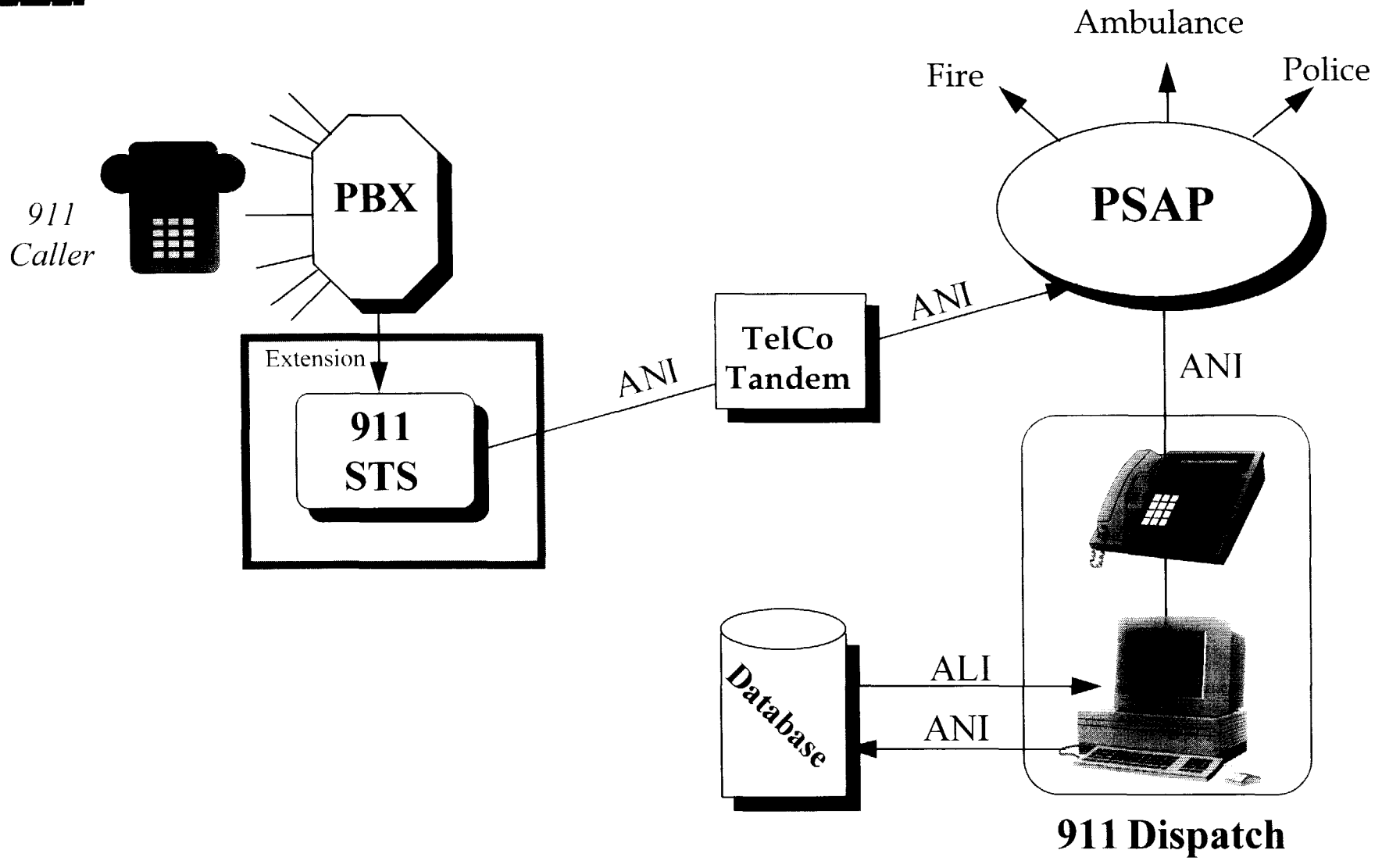


ANI = 1) Selective Routing
2) Call Back #
3) ALI Retrieval

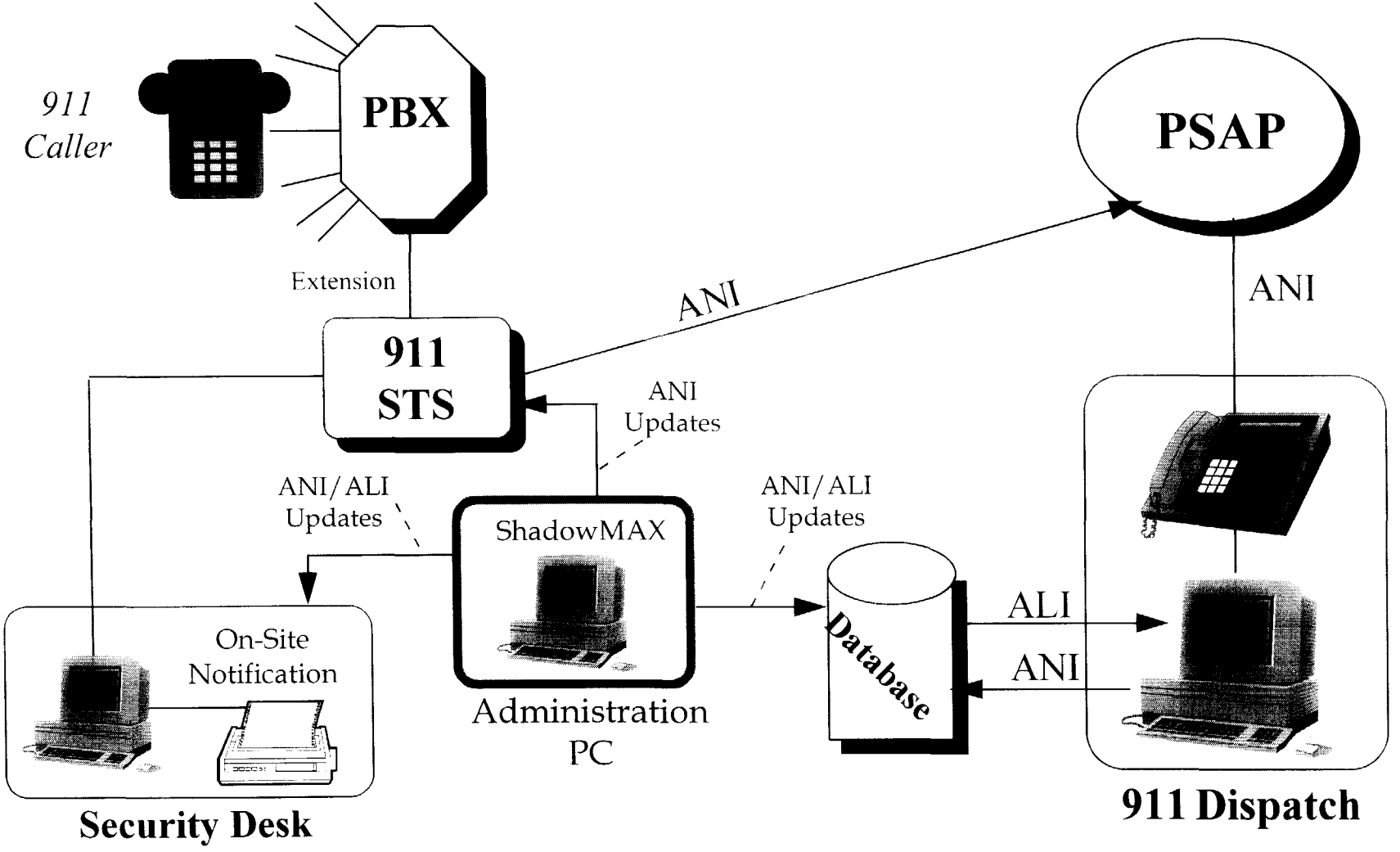
The PBX/911 Call



Enhanced PBX/911 Call Solution

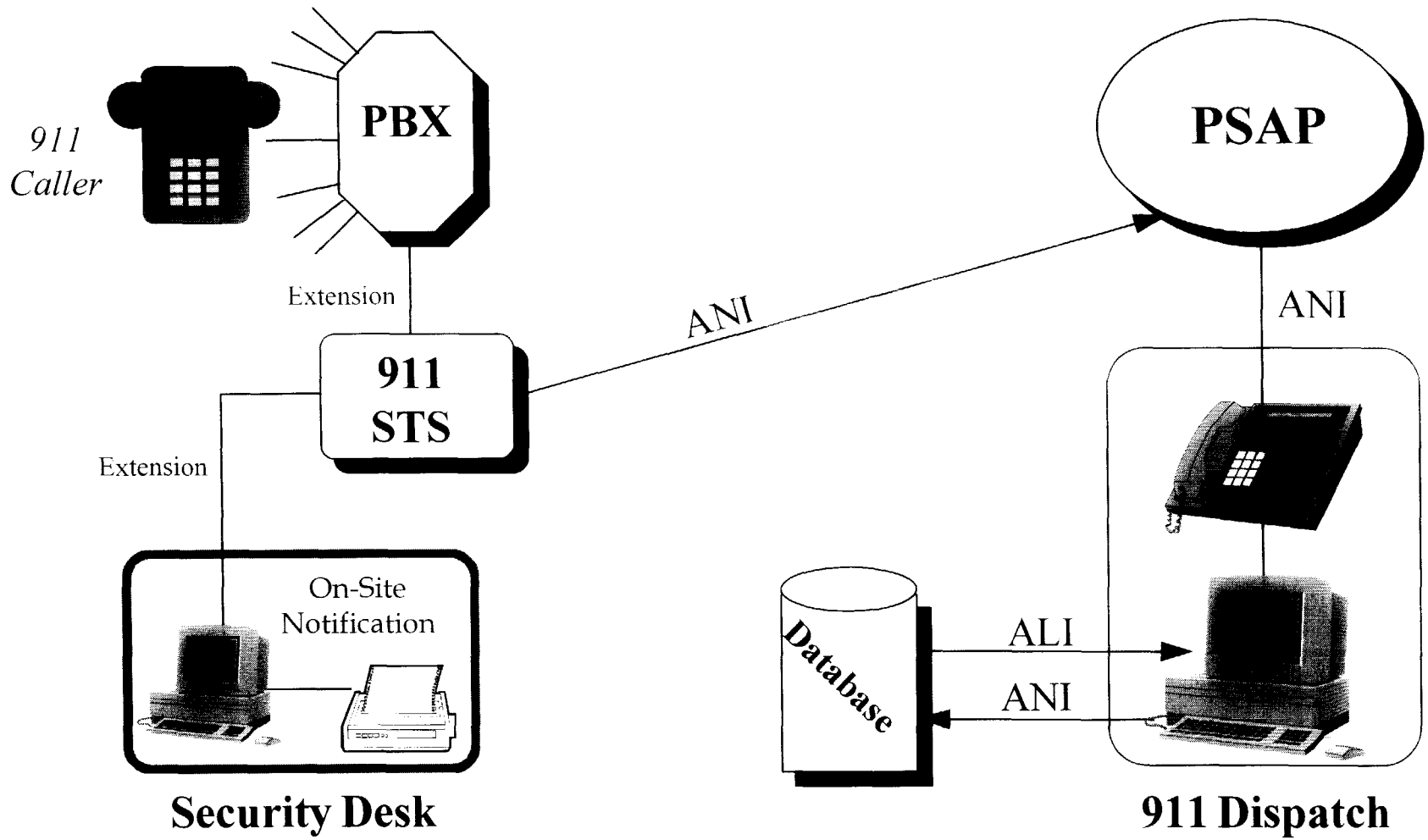


Enhanced PBX/911 Call Solution with On-Site Notification & ShadowMAX DMS



TELIDENT INC.

Enhanced PBX/911 Call Solution with On-Site Notification



TELIDENT INC.

TELIDENT INC.
ONE MAIN STREET SE • SUITE 85 • MINNEAPOLIS, MN 55414
(612) 623-0911 • (800) 536-4911 • (612) 623-0944 FAX

TELIDENT, INC.

Telident, Inc., organized in 1983 as a telecommunications equipment company, is the recognized leader in the development, sale and installation of turnkey hardware, software and service solutions for complete access to the Enhanced 911 Emergency Response Network (E911). Telident's patented technology enables clients to provide critical selective routing, automatic number identification and automatic location identification information to the E911 dispatcher.

The Telident advantage includes the following hardware, software and support services:

- **Patented 911 Station Translation System (911 STS™)**
- **On-Site Notification (OSN) Software**
- **ShadowMAX Database Management System**
- **Automatic Location Identification (ALI) Service Bureau**

Telident is dedicated to providing innovative solutions for the E911 market. The **safety and security of the individual** are its primary concerns.

TELIDENT E911 SYSTEM COMPONENTS

911 Station Translation System

Telident's 911 Station Translation System (STS) is a patented micro-processing system that serves as an interface between a private branch exchange (PBX) and a telephone company central office. This interface, accomplished via dedicated trunking arrangements, is required in order to gain access to the E911 network. The fundamental purpose of the STS device is to automatically deliver to the E911 network a valid seven digit telephone number in an acceptable E911 format.

When the STS system is connected to the PBX, the PBX is programmed to route all 911 calls through either PBX trunk or PBX station cards to the Telident device. Upon receipt of a 911 call, the STS system performs two types of translation functions:

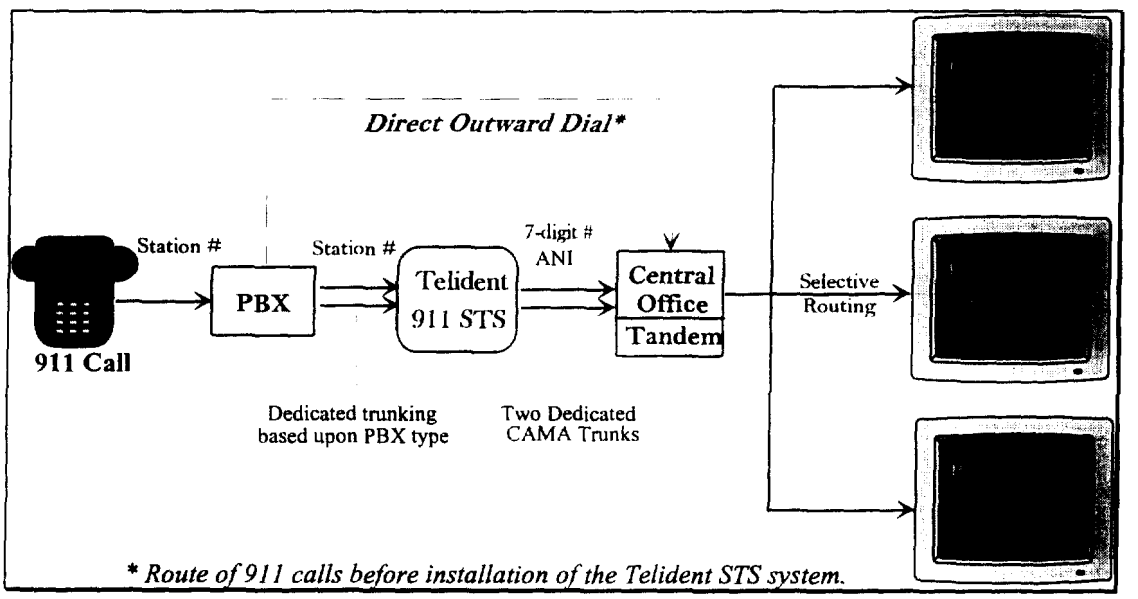
- PBX tones and signals are converted to tones and signals recognizable to the E911 network.
- PBX three through six digit station numbers are converted to valid seven digit telephone numbers required for proper identification of the call by E911 network operations (**Automatic Number Identification**). Direct inward dial (DID) telephone numbers, as well as non-DID telephone numbers, can be translated to a required seven digit call-back number. Non-DID station numbers are assigned to the closest DID station number for E911 purposes.

The **Automatic Number Identification (ANI)** translation process provides three key functions:

- **Selective routing** of the 911 call to the appropriate Public Safety Answering Point (PSAP).
- **A legitimate call-back telephone number (ANI).**
- **Automatic Location Identification (ALI)** information pertinent to the calling party's telephone number.

Translation table data is loaded into the STS system prior to shipment and installation of the unit at client locations.

The following diagram depicts the integration and function of the Telident STS system within a PBX/E911 network environment. Full functionality of the STS system requires PBX capability to route calls and to provide calling party station numbers to the STS device.



The diagram depicts a single PBX/E911 configuration. Multiple PBXs networked within a client environment, each able to pass distinct station identifiers either to the other or to a designated host PBX, provide a similar solution using only a single STS system.

Each STS system comes equipped with two E911 trunk cards for support of up to 5,000 PBX stations. Additional trunk cards can either be added to accommodate PBX environments greater than 5,000 stations or added where the potential for E911 calls looms larger than anticipated.

The **STS system safeguards** ensure maximum probability of 911 call completion. In idle condition the STS system emits a signal at specified intervals seeking a trunk ready signal in return. If the trunk does not respond to the STS signal, the STS system goes off-hook creating a lock-out condition between the STS system and the E911 selective routing tandem switch. With the STS system in this condition 911 calls are routed through the PBX over a standard direct-outward-dial (DOD) trunk using a pre-determined default telephone number.

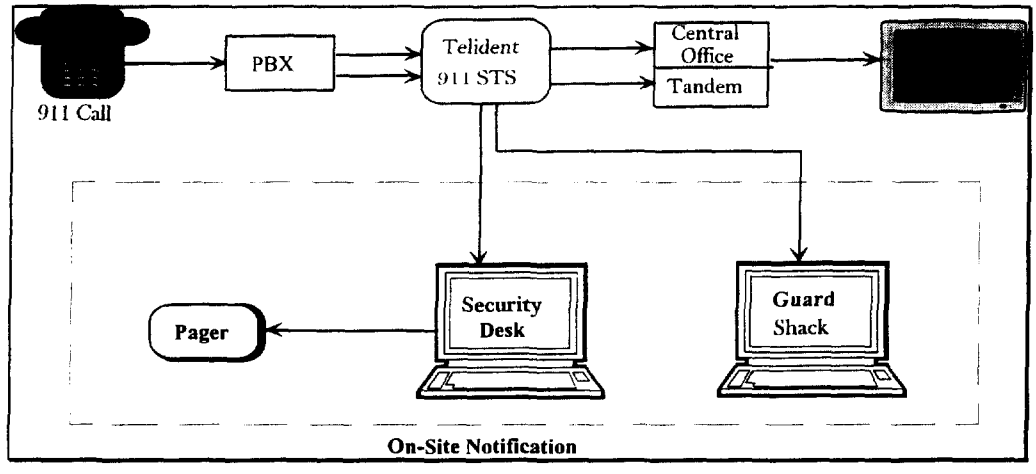
The STS system also reverts to a lock out condition when at capacity processing 911 calls in active mode. Under these conditions the STS system processes the next incoming 911 call using the standard DOD trunk method of communication described above..

Should the Telident STS system fail while power to the system remains intact, 911 calls will continue to follow an outbound path from the PBX over DOD trunks to the E911 network.

Telident's STS system is also capable of providing **call status and call detail information** in conjunction with optional on-site notification applications software. These call status and call detail messages include call start and stop times, STS busy conditions, PBX link status, extensions not found, early 911 call aborts and other relevant system information.

On-Site Notification Application Software

Telident's On-Site Notification (OSN) software enables clients to view simultaneously calls made to the E911 system from single or multiple locations. When a call is placed to the E911 system, the OSN software generates an audible and visual alarm at the OSN monitoring site. Vital OSN database information pertinent to the calling location is also displayed. It can also be used in both attended and unattended (automatic) modes. The software may also be incorporated into existing client local area networks (LAN). The following diagram shows the integration of Telident's OSN capability into the STS/E911 network.



Telident's OSN software application enables client organization on-site personnel to:

- Pinpoint the 911 calling location.
- Facilitate premises access.
- Respond directly to calls.
- Assist outside agencies in locating 911 callers.
- Page key individuals.
- FAX OSN screen information.

The same ALI information resident with the local telephone company is also maintained and stored in the OSN database. Client options exist for the expansion and customization of database information by client location.

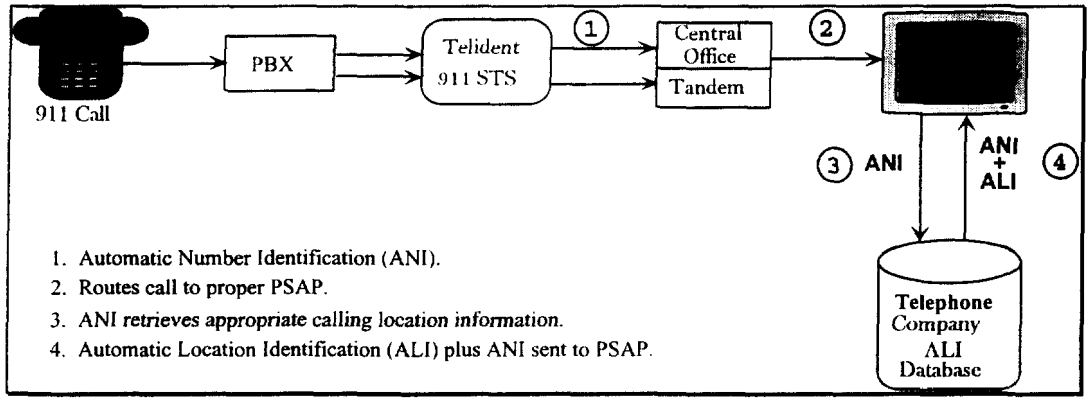
OSN software can be used in either full-service PC mode or in read-only mode using a parallel printer.

Automatic Location Identification

Critical to the installation and proper utilization of Telident's E911 solution is the development and maintenance of an Automatic Location Identification (ALI) database. When placing a 911 call, the call is routed from the PBX through Telident's STS system to the PSAP in the following sequence:

- A valid ANI is delivered over the network via dedicated trunks.
- The 911 emergency call is selectively routed to the proper PSAP.
- The 911 call is answered at the PSAP, voice contact is established, and the calling number (ANI) is displayed.
- Simultaneously, the ANI is sent to the ALI database for retrieval of caller location information.
- Combined ANI/ALI 911 call information populates the dispatcher's display screen.

The diagram below depicts the 911 call processing sequence.



For this sequence to work without error, each client must construct and maintain an ALI database of information comprised of PBX station number, seven digit DID number (ANI) and corresponding DID location information. This **database structure must be consistent with the standardized National Emergency Number Association (NENA) 240 character format** if it is to be displayed correctly at the PSAP. This data must also be loaded into telephone company master database management systems. It is the **client's responsibility to keep this information current.**

Service Bureau

Telident Service Bureau is a stand-alone, dedicated ALI database construction and maintenance offering. **ALI database construction services** include:

- Consulting with clients relative to data requirements, data format and database construction process.
- Database construction in accordance with ALI database requirements.
- Verification of compliance with database standards.
- Loading of ALI database information to appropriate agency databases.
- Delivery of a completed database to the client.
- Database storage location listings.
- Archiving of master ALI database information.
- Loading ALI database information into the Telident STS system.

Telident will ensure database integrity. Telident will also integrate its database maintenance processes with client procedures for telephone move, add and change activities affecting client station set location information.

Telident, as agent for the client, will initiate contact with either the serving telephone company or its agent for the transfer of ALI database information to appropriate agencies having need for this information. Telident will also **coordinate** the ordering and **installation** of the dedicated trunks necessary to connect Telident's STS system to the E911 network. Installation coordination activities are provided to clients for a fee.

Telident's **ALI database maintenance services** include:

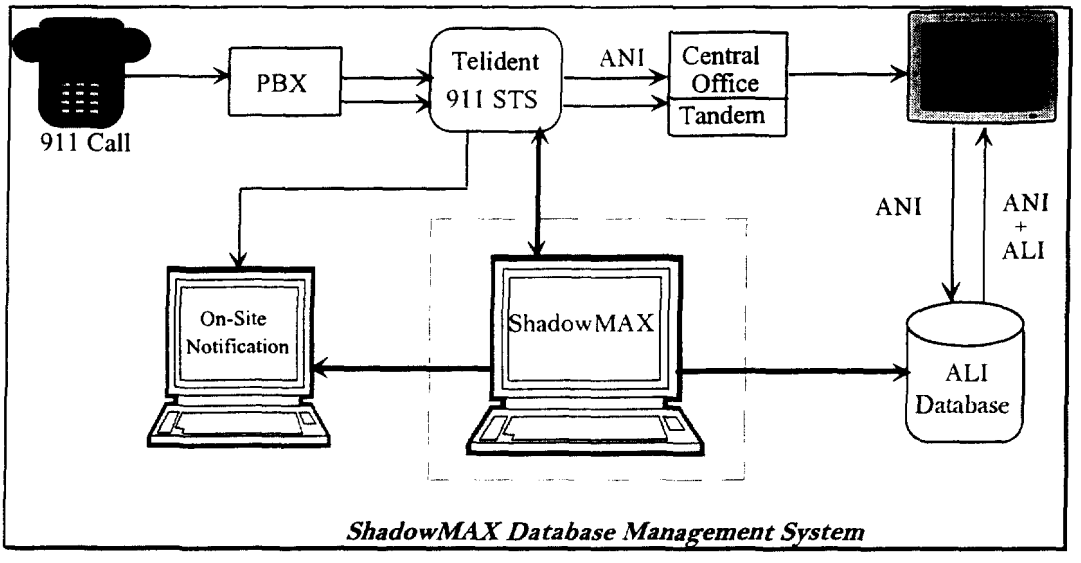
- Modifying master ALI database information in response to client notification of move, add and change activities.
- Updating ALI database repositories as changes occur.
- Confirming ALI database update activities with the client.
- Issuing monthly reconciliation reports of ALI database activity.
- Recommendations for corrective action to be taken and/or preventive measures necessary to limit data corruption.
- Annual functional check-up and reporting on the condition of ALI database operations, to include equipment and soft configurations.
- Satisfaction level surveys.

Telident's goal in offering service bureau assistance to its clients is to ease client responsibility for construction and on-going maintenance of a key system component, a component vital to effective utilization of the E911 network.

The client bears ultimate responsibility for the accuracy of telephone location information provided to Telident. Client move, add and change activities performed during database construction must be reported to Telident for incorporation into the master ALI database.

ShadowMAX Database Management System

ShadowMAX, a WINDOWS™ based software application, is designed for client maintenance of the E911 ALI database. ShadowMAX can handle move, add and change activity information relative to station set locations and telephone numbers by comparing these activities against an existing database of information. ShadowMAX is capable of generating a list of move, add and change transactions. These transaction updates are stored in ShadowMAX until transmitted by the client to appropriate database repositories. The following diagram depicts the integration of ShadowMAX with other Telident system components and the master ALI database.



ShadowMAX Database Management System

Features of the **ShadowMAX** database management system include:

- On-line paperless access to and maintenance of ALI database information.
- Simultaneous access by multiple users.
- Multiple site support via modem dial-up to remote systems.
- Multiple project definitions and schedules:
  - Implementation now
  - Implementation in the future
  - Postponements
  - Recurring events
- Intelligent choice listings:
  - Stations
  - DID numbers
  - Ports
- User-defined reports.

Telident will, for a fee, construct the initial database of information to be loaded into the ShadowMAX Database Maintenance System (see Service Bureau: ALI Database Construction Services).

ShadowMAX functionality includes:

- Creation, modification and deletion of E911 ANI/ALI information.
- Assignment/reassignment of one or more station identifiers to a given ANI. ShadowMAX software handles station identification translations for DID, non-DID and mixed DID/non-DID environments.
- On-site notification of 911 calls.
- Updating of ANI/ALI databases from the master ShadowMAX database.
- Tracking divergence between the PBX and the STS unit in locating new station locations not captured by ShadowMAX.

ShadowMAX is best suited for clients able to devote administrative personnel and resources to database management activities.

OPTIONAL SYSTEM SUPPORT

Training

Telident provides training for operation of its STS, OSN and ShadowMAX systems on a fee basis.

Spare parts

The client has the option to purchase STS spare processor boards and cards. **System spares** include components for the following types of PBX equipment: **AT&T; Ericsson; Fujitsu; Hitachi; Mitel; Northern Telecom; Siemens ROLM; and Tadiran.**

Warranty

Telident STS systems are warranted for 15 months from the date of shipment. This warranty covers defects in workmanship and material. **Any Telident product found to be defective during the warranty period will either be repaired or replaced at no cost to the client provided the defective unit is returned either to Telident or an authorized Telident agent for repair.** Warranty shall be null and void if the equipment is subject to acts of God, vandalism or because of damage to products that have been tampered with and/or repaired by unauthorized personnel.

Telident products, when returned to Telident via air freight, will either be repaired or replaced within two (2) working days following receipt of the product. Products received by surface freight will either be repaired or replaced within five (5) working days from receipt of equipment. Return shipments to the client will be via the means the product is received by Telident. The client will pay shipping costs to Telident. Telident will pay return shipping costs to the client.

Either the client or an authorized Telident agent will call Telident's Customer Service Bureau via a toll free 800 number to report warranty related issues. Upon receipt of the call, Telident Customer Service will:

- Assist with problem diagnosis.
- Resolve the problem remotely when possible.
- Initiate repair/replacement of equipment procedures.
- Follow-up after problem resolution to ensure client satisfaction

Customer Service assistance is available 24 hours per day, seven days per week.

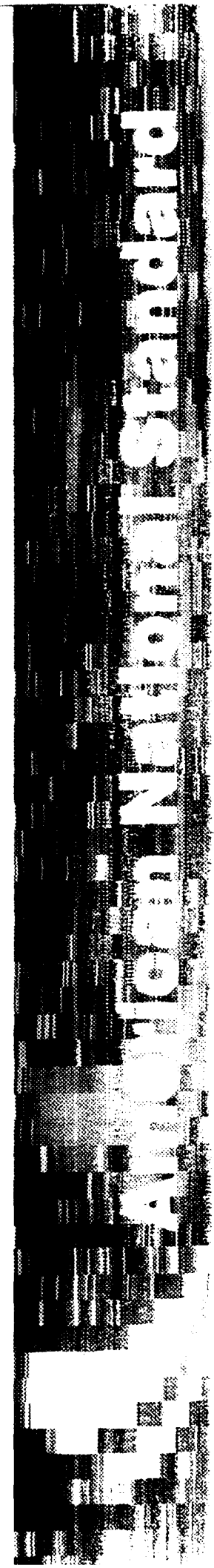
An **extended warranty** period of an additional 12 months for Telident STS equipment is available to clients for additional charge.

Maintenance and Product Support

Telident **on-site maintenance support is available on a time and materials basis** plus expenses. Product support is available 24 hours per day, seven days per week, via a toll free 800 number.

Documentation

A Telident User's Manual is provided to clients with each unit of equipment. The manual includes material relevant to equipment installation, maintenance and trouble-shooting routines. Equipment diagrams are also included. User Manual updates are provided to clients at no charge. Additional manuals are available upon request for a fee.



for Telecommunications –

Interface between Carriers and Customer Installations – Analog Voicegrade Enhanced 911 Switched Access Using Network-Provided Reverse-Battery Signaling

ANSI T1.411-1995

ANSI American National Standards Institute
11 West 42nd Street
New York, New York
10036

ANSI®
T1.411-1995

American National Standard
for Telecommunications –

Interface between Carriers and Customer Installations – Analog Voicegrade Enhanced 911 Switched Access Using Network-Provided Reverse-Battery Signaling

Secretariat

Alliance for Telecommunications Industry Solutions

Approved January 3, 1995

American National Standards Institute, Inc.

Abstract

This standard provides interface requirements for the interconnection of Customer Installations (CIs), such as Private Branch Exchanges, to Enhanced 911 systems. The interface allows the CI to transmit the caller's emergency service identification information to an Enhanced 911 system in applications where multiple terminals share Enhanced 911 switched access. These requirements are intended to assist carriers, end-users, and manufacturers.

American National Standard

Approval of an American National Standard requires verification by ANSI that the requirements for due process, consensus, and other criteria for approval have been met by the standards developer.

Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution.

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Published by

American National Standards Institute
11 West 42nd Street, New York, New York 10036

Printed in the United States of America

APS3C395/21

Contents

Foreword (This foreword is not part of American National Standard T1.411-1995.)

This American National Standard is one of a series of telecommunications carrier-to-customer installation interface standards developed by Technical Subcommittee T1E1 of Accredited Standards Committee T1, Telecommunications. Committee T1 standards serve the public interest through promoting understanding between carriers, end-users, and manufacturers.

Many states and jurisdictions are considering, or have adopted, regulations concerning Multi-Line Telecommunications System (MLTS) support of Enhanced 911 calling service. The regulations are intended to assure that 911 callers who use terminals connected to an MLTS receive the full benefits of Enhanced 911 service. With so many jurisdictions involved, however, it is inevitable that there would be significant differences in how MLTS–Enhanced 911 system interconnection is currently being implemented in various areas. To alleviate the confusion that this situation has created for carriers, MLTS manufacturers, and end-users, an interface standards project was initiated in the T1E1 Technical Subcommittee. This standard will accommodate most existing Enhanced 911 systems.

This standard provides interface requirements for the interconnection of Customer Installations (CIs), such as Private Branch Exchanges, to Enhanced 911 systems. The interface allows the CI to transmit caller's emergency service identification (CESID) information to an Enhanced 911 system in applications in which multiple terminals share Enhanced 911 switched access.

This standard will be useful to anyone engaged in the provisioning or operation of telecommunication equipment or services that are intended to interact with an Enhanced 911 system. It establishes the requirements at the interface between the CI and the network, which is designated the Network Interface (NI). Compliance should provide compatibility in most installations. In some cases, system-oriented options need to be implemented to ensure compatibility; this need for options is imposed by significant differences between carriers as well as between network elements.

Several MLTS–Enhanced 911 technical issues that need to be considered by the industry are not addressed in this standard. These issues include, but are not limited to, uniform dialing, alternate routing, routing capacity, attendant notification, CESID assignment, callback number assignment, and the format for database information.

There is one annex to this standard. Annex A is informative and is not considered a part of this standard.

ANSI guidelines specify two categories of requirements: mandatory and recommendation. The mandatory requirements are designated by the word "shall" and recommendations by the word "should." Where both a mandatory requirement and a recommendation are specified for the same criterion, the recommendation represents a goal currently identifiable as having distinct compatibility or performance advantages.

Suggestions for the improvement of this standard will be welcome. They should be sent to the Alliance for Telecommunications Industry Solutions, T1 Secretariat, 1200 G Street, NW, Suite 500, Washington, DC 20005.

This standard was processed and approved for submittal to ANSI by Accredited Standards Committee on Telecommunications, T1. Committee

approval of the standard does not necessarily imply that all committee members voted for its approval. At the time it approved this standard, the T1 committee had the following members:

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Bob Welborn, Senior Editor
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National Communications System	Dennis Bodson
National Institute of Standards and Technology	David Cypher
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Rural Electrification Administration	Donald M. Van Bellinger George J. Bagnall (Alt.)
U. S. General Services Administration	Douglas K. Arai Patrick Plunkett (Alt.)

At the time it approved this standard, Technical Subcommittee T1E1 on Interfaces, Power and Protection of Networks had the following members:

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T. G. Croda, Vice-Chairman
L. Katz, Secretary

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Adtran	Michael D. Turner Jerry D. Moore (Alt.)
Alcatel Network Systems (ANS)	Bill Crane Joe Smith (Alt.)
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AT&T Network Systems	Mohammad Vakili Jonathan Smith (Alt.)
Bell Atlantic	Trone Bishop Lita B. Gwinn (Alt.)
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General DataComm, Inc.	Hugh Goldberg Emil Ghelberg (Alt.)
GTE Telephone Operations	Norman Epstein Gary F. Willett (Alt.)
Harris Corporation	Harby Sehmar Yogi Mistry (Alt.)
Hekimian Laboratories	William H. Duncan Joseph E. Murtha (Alt.)

Organization Represented	*Name of Representative*
Hewlett-Packard	Richard van Gelder
IBM Corporation	Neville L. Golding
Level One Communications, Inc.	Andrew Sorowka
	Kirk Hayden (Alt.)
MCI Telecommunications Corporation	Curtis Brownmiller
	Stephen J. Engelman (Alt.)
Mitel Corporation	C. Seto
	John Needham (Alt.)
Motorola, Inc.	Mort Stern
	Ciaran Connell (Alt.)
National Communications System	Gary Rekstad
National Semiconductor Corporation	Chris A. Stacey
	Roy Batruni (Alt.)
NEC America, Inc.	Donovan Nak
	Wayne Lohman (Alt.)
Newbridge Networks Corporation	Gordon Beall
	Don Morrison (Alt.)
Northern Telecom, Inc.	Mel N. Woinsky
	Ed Ehrlich (Alt.)
NYNEX	Leo Katz
	F. T. Burns (Alt.)
Pacific Bell	Mark Younge
	Sal R. Tesoro (Alt.)
Pairgain Technologies	Bruce Kimble
	Mike Lefkowitz (Alt.)
Performance Telecom	Kevin Mullaney
	Jim Seago (Alt.)
Ratelco, Inc.	Alvin G. Graham
	Mark Resler (Alt.)
Reliance Comm/Tec	Leroy Baker
	Bill Chen (Alt.)
Rockwell International	Quent C. Cassen
Siemens Stromberg-Carlson	Gunter Neumeier
	Michael A. Pierce (Alt.)
Southwestern Bell Corporation	Rolyn Callahan
	John E. Roquet (Alt.)
Sprint – Local Telecommunications Division	Irvin Youngberg
	Harold L. Fuller (Alt.)
Sprint – Long Distance Division	Tom G. Croda
	Robert E. Lagrand, Jr. (Alt.)
Stentor Resource Centre, Inc.	Frank McCaughey
	P. N. Smith (Alt.)
Telecom Reliability Services	William Bush
Telecom Solutions	Kishan Shenoi
	M. J. Narasimha (Alt.)
Telecommunications Techniques	Bernard E. Worne
Telident, Inc.	Martin D. Moody
Thomas & Betts Corporation	Roy Jazowski
	Francis J. Fiederlein (Alt.)
US Telephone Association (USTA)	Gerald Stearns
US WEST	Don Bowey
	Charles Cook (Alt.)
Westell, Inc.	Ken Hohhof
	Ron Koval (Alt.)